In Perspective

The Greatest Game Fish

by Ed Ives

"The greatest game fish of the angling world," was the way the steelhead was described in the second biennial report of the Washington Department of Game. That report in 1935 went on to say that

> Contrary to common opinion, the steelhead is not a specie (sic) of salmon, but in reality is a rainbow trout which migrates to salt water at certain periods of the year. Fame of Washington's steelhead has spread to the far corners of the United States and to foreign countries as well.

In 1935, little was known about steelhead, and some confusion (whether or not intentional) over steelhead and salmon may have been understandable. Although records exist of steelhead egg takes from western Washington rivers all the way back to 1905, there were no fish hatcheries devoted primarily to steelhead until 1957. Steelhead eggs were held at salmon hatcheries and were generally planted as "eyed" eggs. Since the salmon and steelhead had different spawning cycles, this practice enabled more full-time use of hatchery facilities. The steelhead was not even classified as a game fish until 1935, when the Legislature adopted regulations approved a year earlier by the new Washington Game Commission.

Ironically enough, the earliest efforts by state fish managers to improve populations of steelhead were self-defeating. In-taking eggs from many streams at the peak of a fish run, there was no thought given to leaving any fish to re-populate the stream itself. Since the eggs were seldom planted back into the same streams they were taken from, some streams' runs of steelhead fell to a fraction of what they had been until the egg-takers realized what was happening. It must be kept in mind, however, that taking of steelhead eggs began back about the turn of the century, and little knowledge existed about the habits of anadromous fish.

Even in the early 1930s, when the WDG was young and feeling its way along in fish and wildlife management, very little was known about the life cycle of the steelhead other than that it migrated to saltwater and returned as an adult.

To build up diminishing runs, hatchery workers took spawn at various places on streams where natural runs of fish existed. These efforts turned out fry by the millions, which were in turn released in more or less haphazard plantings in waters where it was hoped they would survive.

In the WDG's biennial report issued in 1939, it was admitted that the "migratory tendencies" of the steelhead had long "been a source of conjecture."

> To learn something of its habits and the effect of planting, the Department of Game started a series of experiments in 1937 which form the basis for a current release by the biological division.
> . . . concrete facts on the migration time and extent of steelhead fishing were needed in order to better manage this important game fish. Such an experiment was started in August, 1937.

That experiment consisted of tagging 5,000 14-month-old steelhead with red Celluloid tags, 3/16 inch by 3/4 inch, that were inserted into the bodies of the fish. The adipose fin was also clipped, a practice that is still followed in marking fish, although the internal Celluloid tag idea was later dropped.

Streams such as the Satsop River in Grays Harbor County were heavily stocked with tiny fry, without any assurance they would live to return as adults. Between 1933 and 1939, over 900,000 steelhead fry were released into the Satsop system alone, while streams such as the Green, Skykomish and Skagit received similar plants. Nearly 6,000,000 young steelhead were released from Washington hatcheries in 1939. Only seven percent were fingerlings and not more than 25,000 were of migratory size. The total weight of the 1939 plant was 11,926 pounds. Later, biologists were to realize that planting so many fish into waters already carrying an unknown or capacity population placed an overload on those streams. The resulting competition for living space and food made high fish mortality likely. From this experimental beginning, the practice of releasing only migratory fish was established, using the streams as a "highway" to and from the ocean.

The expanding steelhead program of the WDG 30 years ago was based in large part on the pioneering studies of biologists Clarence Pautzke and Robert Meigs during 1940-41. Until the studies by Pautzke and Meigs, the "more is better" school in steelhead planting reigned supreme. Annual steelhead egg takes of up to more than nine million (in 1936) had been obtained from western Washington streams. After hatching, the tiny steelhead fry were released into many river systems where they had to compete with the existing wild steelhead stocks. The biologists' studies showed, however, that planting of steelhead fry in rivers did little or no good in boosting the angler's take-home catch.

The research done in 1940-41 showed that planting of steelhead smolts, migrant-sized fish of about six to the pound, could significantly improve steelhead runs in some streams. Pautzke and Meigs also recommended seasons that would allow protection of the migrants on their journeys to the sea.

The steelhead plant of 1940, which totaled 3,500,000, included only 3 percent fingerlings, or fish that were larger than 100 to the pound. The total weight of the plant was 4,521 pounds. In 1946, only 340,822 steelhead were released from Washington hatcheries, but the total weight had jumped to 18,028 pounds with 68 percent fingerlings.

By the mid-40s, only a relatively few anglers had caught the steelhead fever, but their numbers were growing. It became even more important to learn more about the fishing pressure on steelhead in order to plan for future stocking efforts. So, the WDG established a punch card system in 1947, when the estimated

number of steelhead anglers in the state was a mere 19,000. The punch cards provided for angler reports on the steelhead harvested and gave biologists information that up until then had only been roughly obtained on a few streams.

About the same time that punch cards came into use, there was a stepped-up hatchery program inaugurated that relied on various marking systems of hatchery fish to yield still more information on survival and harvests.

Fish biologists for the department were becoming expert at their jobs, as evidenced by a report in the GAME BULLETIN in April of 1953.

> Fish biologists Ralph Larson, John Ward and Fred Holm probably set something of a record in piscatorial surgery recently, when they marked 100,000 steelhead fingerlings for release in the Satsop River. 25,000 of the fish, which averaged 6 to 9 inches in length, were marked by removing the adipose and left ventral fins. The remaining 75,000 lost the left ventral fin only.

Larson, who was to work his way up through the ranks to become director during the 1970s, was a statistically-minded soul in addition to being quick with his hands. He noted that each member of the team marked an average of 425 "two-fin-clipped" fish per hour and 830 "one-fin-clipped" fish per hour. The time spent included setting up the ponds, seining and so forth.

The early 1950s were exciting times for fish biologists. The phenomenal returns from the early plants of steelhead smolts seemed to promise unlimited benefits from expanded steelhead planting programs. It was the "boom time" of steelheading and the number of anglers wanting to pursue the "king of Washington game fish" grew steadily. They jumped to around 100,000 strong by the late 1950s and, based on punch card sales, reached a peak of more than 200,000 in the late 1960s. The number of punch cards sold in recent years has dropped off from the record highs of the 1960s, but still hovers around 100,000 a year.

During the 1960s and early 1970s, the Washington Department of Game made a major push to build semi-natural rearing ponds for steelhead fry hatched at the Chambers Creek or Skamania hatcheries. Rearing ponds were built on the Skagit and the Stillaguamish. In the late 1960s, the Cowlitz Hatchery was built and rearing ponds were developed on the upper Columbia River. As federal matching money became available from the Federal Anadromous Fish Program, steelhead rearing facilities were built on the Green, Skykomish, Skokomish, Bogachiel and Calawah. While the bulk of the steelhead rearing program since the early 1950s has been devoted to raising of smolts, fry can still be used successfully for restoration of waters that are well under their carrying capacity.

Over the years, the fighting spirit of the steelhead has not diminished, and the die-hard steelhead angler still prizes his catch above all other game fish. The nature of the sport has changed, due to better road and river access, better fishing tackle and increased summer-run fish that don't demand frozen fingers as part of the price of catching one. Federal court decisions since the mid-1970s have greatly complicated the business of steelhead management and lessened opportunities for sportsmen. Federal funds have been cut for anadromous fisheries enhancement and budget cuts at the state level have further eroded money available for steelhead programs.

Other major factors that influence steelhead management today include the game fish's physical and biological competition with commercial salmon species, the effects of reduced stream flows and loss of spawning and rearing habitat. Dams, urban growth, agricultural and logging practices — all have affected the management and the survival of the northwest's gamest fish.

There is also a philosophical change that has taken place in steelhead management, however, that really isn't a change at all, but more of a swing of the pendulum back to what biologists have known all along. In the department's biennial report issued in 1939, there's a passage that reads like this:

> It is well to point out here, that artificial reproduction is only supplementary to natural reproduction and, by every practical means, wildlife in Washington is encouraged to carry out its own salvation and system of propagation and welfare. The position of the biologists is to expedite this natural reproduction by removing all possible obstacles which impede nature's plan.

Department of Game biologists know much more today about the interaction of fish species and strains within a stream; about the competition between wild stocks and planted fish. The emphasis today is more on stream-by-stream management, with some major systems apparently destined for "wild fish" management, and hatchery fish planted only when the native run will not be disrupted. Steelhead planted in a stream are now from stock native to that stream, whenever possible.

Steelheading has come a long way from those days more than half a century ago, when a small group of cold and hungry fishermen gathered around a warming fire on the banks of the Green River. They felt something had to be done to

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help their favorite game fish, and they decided to form a club. That handful of believers became the Steelhead Trout Club of Washington, the prime "movers and shakers" who would mount the successful drive to classify the steelhead as a game fish.

That the steelhead is a fish worth fighting for is well established. It's also a fish that's noted for fighting back, and there are even news stories to attest to that fact. An Associated Press report quoted in the WDG Game Bulletin in 1968 related a fish story that's hard to top.

It seems that an angler named George Acker had to have a tetanus shot after being bitten on the nose by a steelhead. Acker's boat was in the Columbia River near Stevenson, when a friend in a nearby boat hooked a 31-pound steelie that flip-flopped into Acker's boat. Acker did the sporting thing, retrieving the fish for his friend, but in so doing he got the squirming steelhead's teeth snagged on his nose. In spite of being "hooked" by the fish, Acker held on to his friend's catch until help arrived.

Ah — our greatest game fish, indeed! □